

ABSTRACT

5 A method of and apparatus for transmitting an isochronous video stream of data at a
desired frame rate from a source device to a receiving device. A video frame is part of an
isochronous stream of video data which is transmitted over an IEEE 1394-1995 serial bus
network. The desired frame rate is determined by the receiving device. The source device
preferably determines a proper ratio of data packets versus video frames in response to the
particular frame rate required and a cycle time for isochronous data. This ratio of data
packets versus video frames rarely computes to an integer result. Accordingly, the source
device preferably generates two groups of frames. A first group contains an integer value of
10 packets nearest to and above the desired overall average ratio of data packets versus video
frames. The source device generates a second group of frames where each frame from this
second group contains an integer value of packets nearest to and below the ratio of packets
versus video frames. To achieve the desired frame rate, the source device generates a frame
ratio containing a specific number of frames from the first group and the second group and
15 forms the isochronous stream of video data. The source device serially generates each of the
frames in an order including a combination of the first group of frames and the second group
of frames to achieve the overall desired average frame ratio. The source device then transmits
the resulting isochronous video stream of data to the receiving device at the desired frame
rate.